

**AMENDMENTS TO THE SPECIFICATION**

Please replace the title of the invention with the following amended title.

Angular ~~Positioning~~ Position Sensing System and Method Using Pulse Width Modulation

Please replace the paragraph beginning on page 5, line 15, with the following amended paragraph.

Turning to FIG. 2, a block diagram of one exemplary phase angle detection system including a two-magnet rotary sensor 240 coupled to a ~~modulator and PWM generator circuit~~ phase angle pulse modulation circuit 203 and a PWM to analog signal circuit 218 consistent with the invention is illustrated. The sensor 240 may include a permanent magnet 246 having a north and south pole that rotates about a center axis 247. The rotating magnet type sensor may include a first magnetic field sensor 244 located at 0 degrees relative to a direction line 249 from the center axis 247. The rotating magnet type sensor may also have a second magnetic field sensor 242 located at 90 degrees relative to the same direction line 249 from the ~~center axis 246~~ center axis 247.

Please replace the paragraph beginning on page 6, line 5 with the following amended paragraph.

The sine input signal and cosine input signal are then input to the ~~modulator and PWM generator circuit~~ phase angle pulse modulation circuit 203 via respective input paths 202 and 204 to an in phase multiplier 210 and a quadrature multiplier 212. A quadrature oscillator 209 may generate a first generated signal,  $\sin \omega t$ . This  $\sin \omega t$  signal may also be provided to the in phase multiplier 210, via a separate first oscillator input path 213. Similarly, the quadrature oscillator 209 may also generate a second generated signal,  $\cos \omega t$ , that may be provided to the quadrature multiplier 212 via a second oscillator input path 215.